



NORTH CAROLINA

Department of Transportation



Project Atlas

Project Management Workshop

November 6, 2018

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Project Atlas Overview



NCDOT Project ATLAS



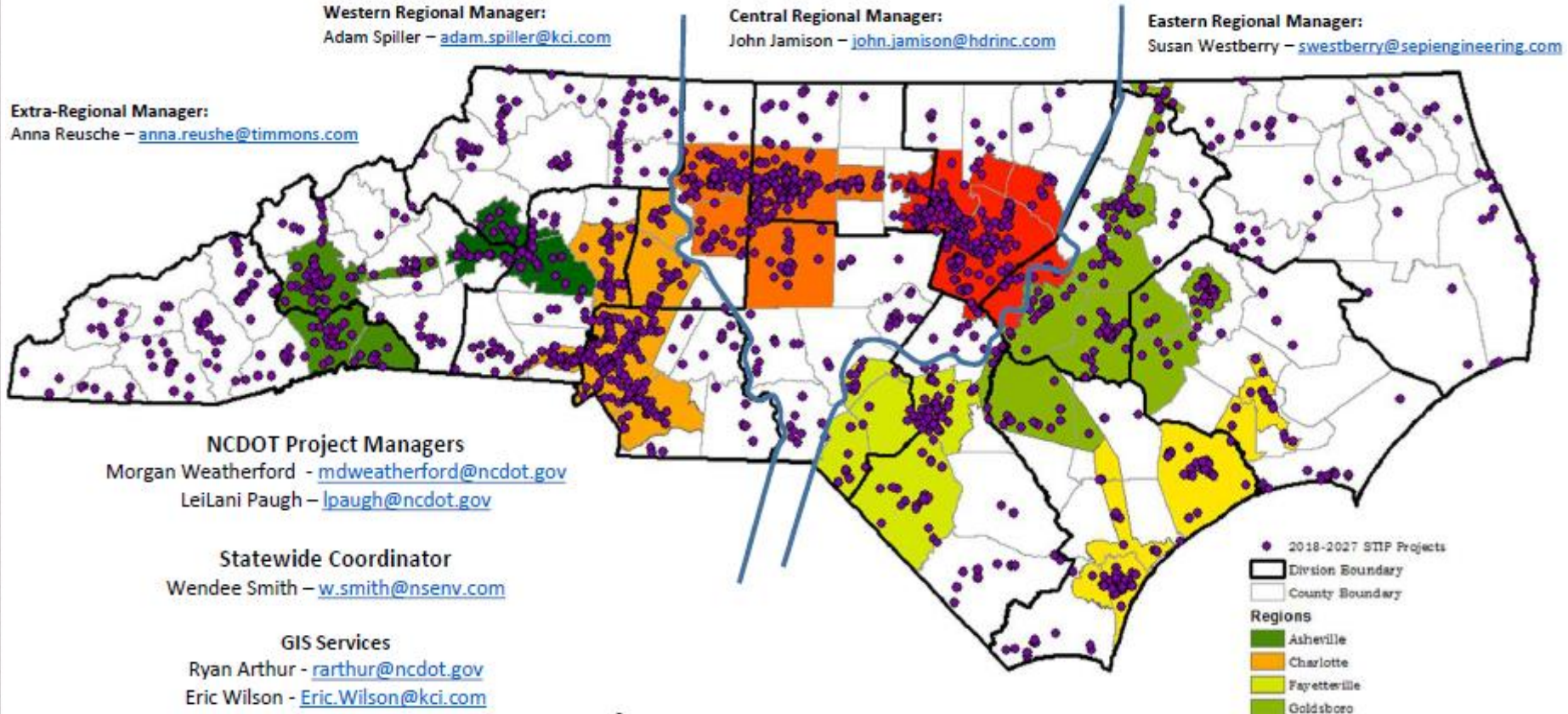
Advancing **T**ransportation through **L**inkages, **A**utomation, and **S**creening

- GIS based regional modeling effort that aligns with the Secretary's Priorities under Improve Program Delivery and Reduce Cash Balance
- Goal is to streamline project development through GIS-based data on a regional level

Project ATLAS

- Reaches across many disciplines
 - Wetlands and Streams
 - Protected Species
 - Sweeping Environmental
 - Historic Resources
 - Traffic Forecasting
 - Community Studies
 - Bicycle and Pedestrian
 - Right-of-Way
 - Utilities

Project Atlas Team

Western Regional Manager:Adam Spiller – adam.spiller@kci.com**Central Regional Manager:**John Jamison – john.jamison@hdrinc.com**Eastern Regional Manager:**Susan Westberry – swestberry@sepiengineering.com**Extra-Regional Manager:**Anna Reusche – anna.reusche@timmons.com

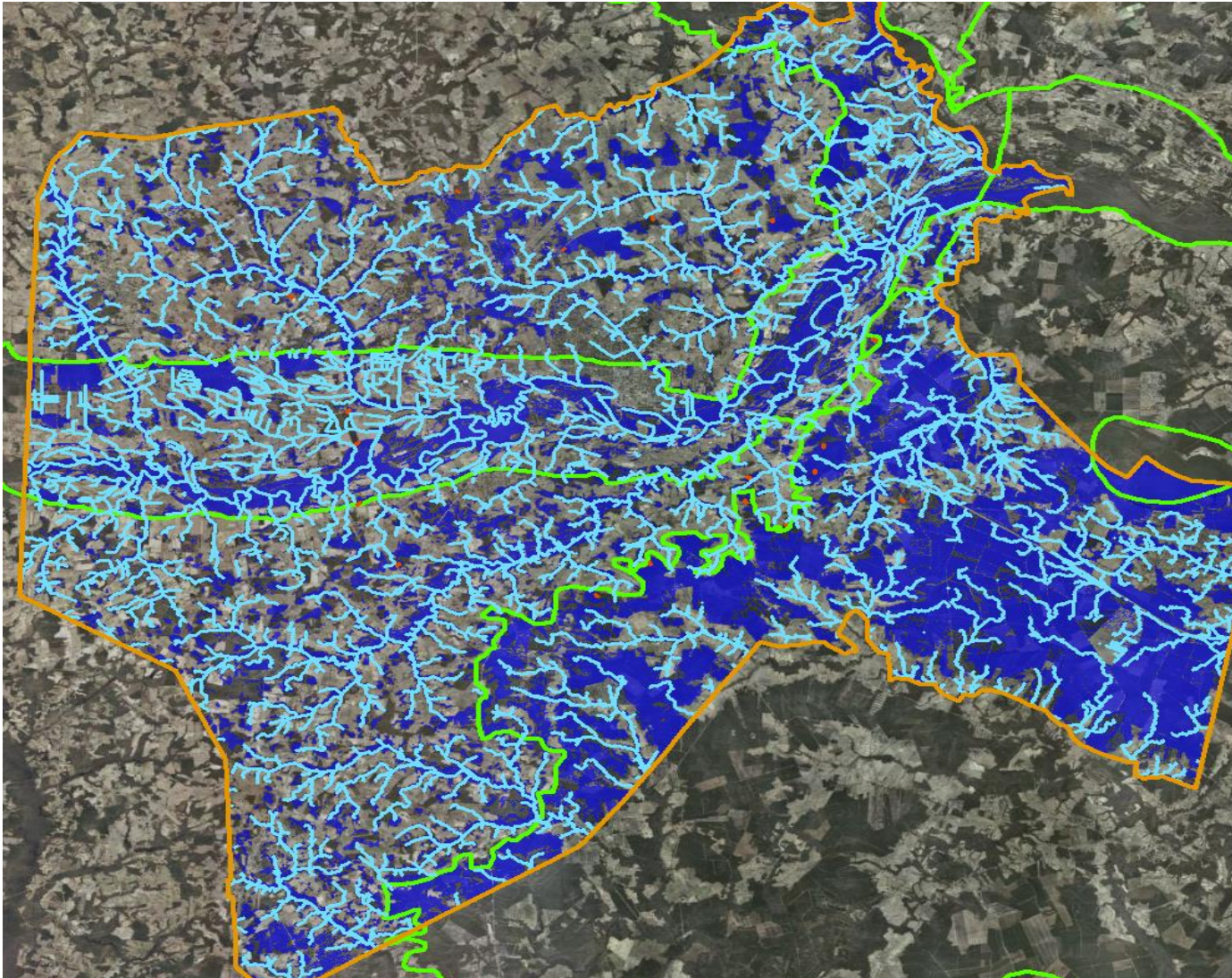
Important Notes on ATLAS

- We are not eliminating field work
- We are not eliminating jobs
- We are pushing more work earlier in the process to help scheduling, budgeting and scoping
- We are helping to deliver better projects within our program delivery goals by:
 - Improving GIS data and management
 - Improving processes

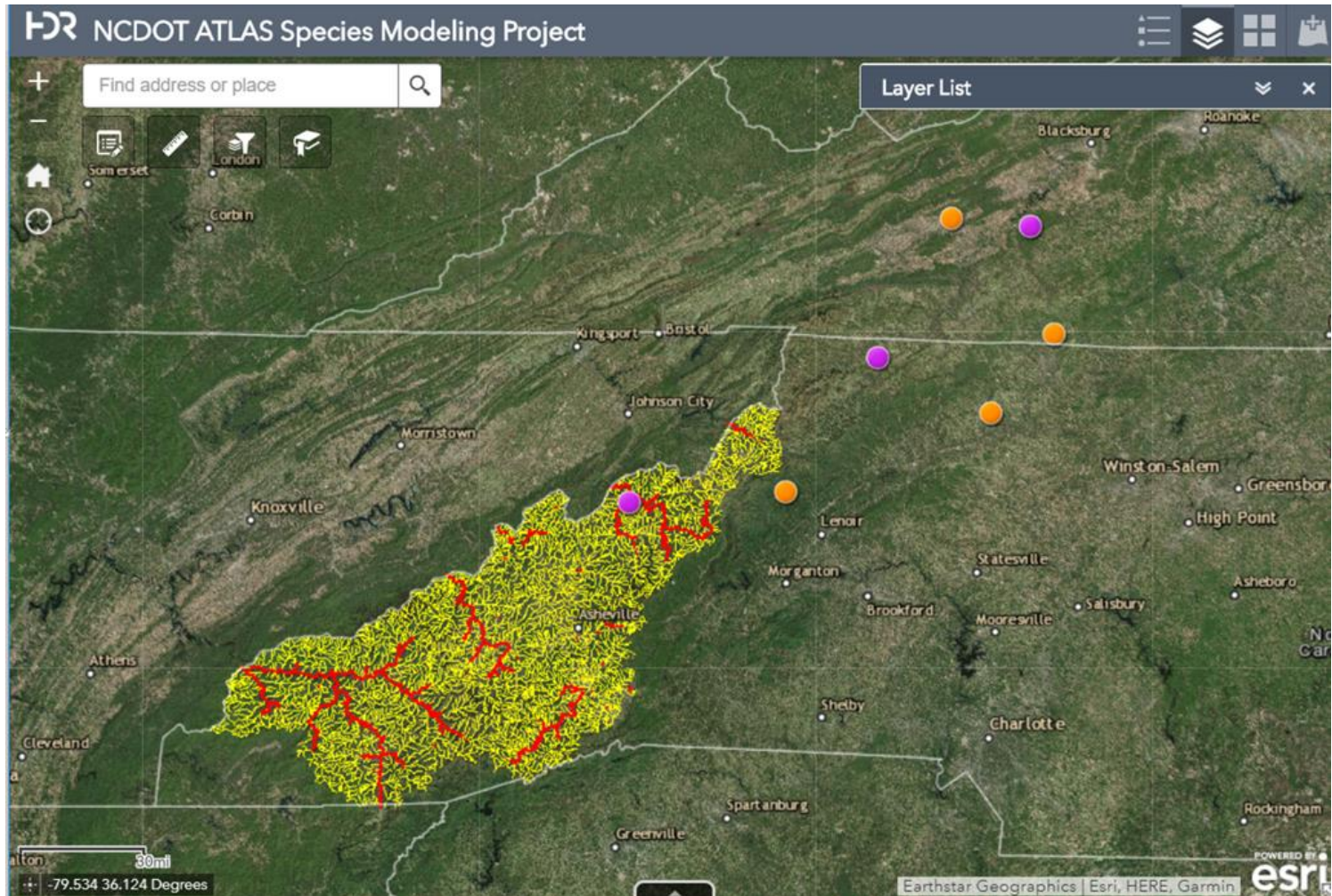
Project Atlas Objectives

- GIS Data Layers
 - Identify all data used to evaluate projects
 - Improve data layers and create new layers where none exist
 - Work with agencies to improve confidence in data
 - Connect data so it is accessible to everyone

Wetland and Stream Models



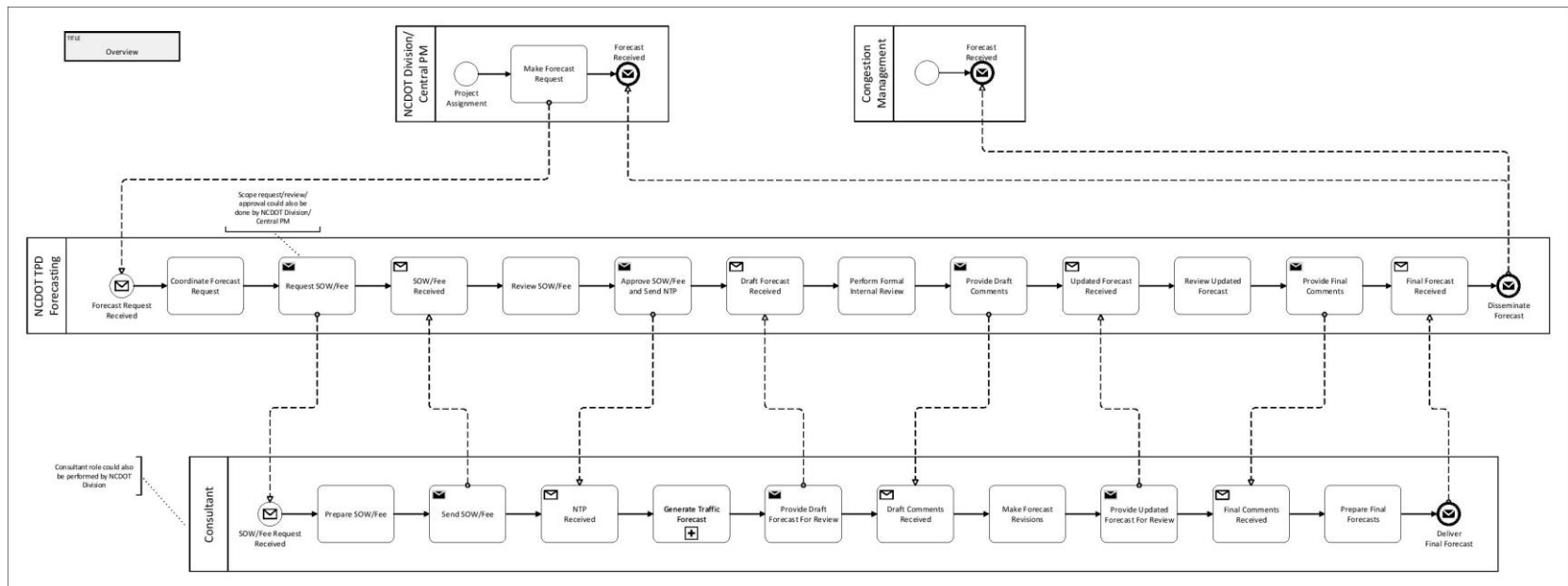
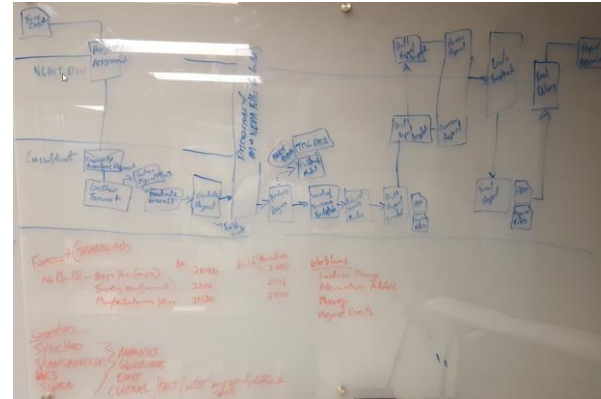
Protected Species Models



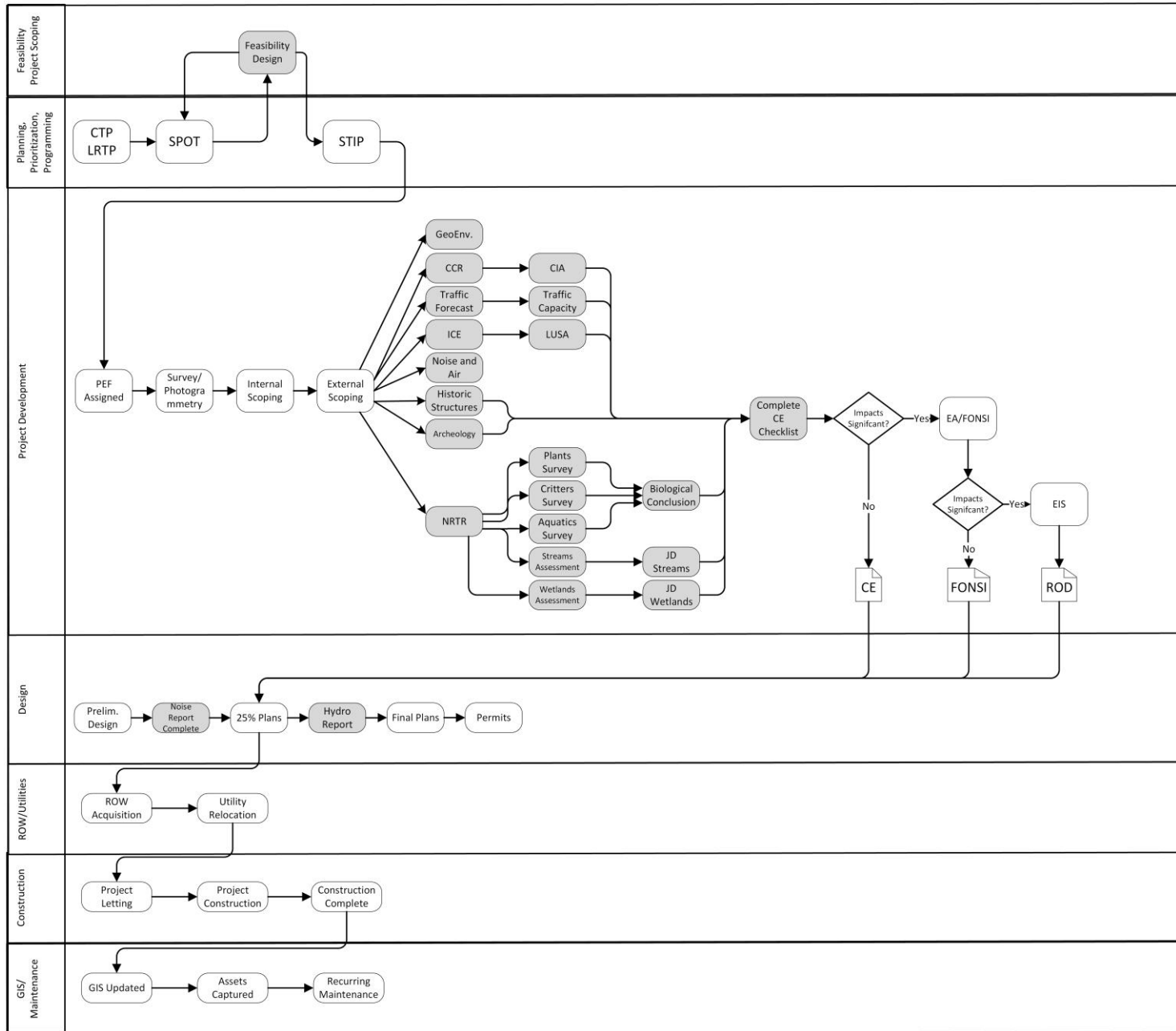
Project Atlas Objectives

- Streamline Project Development
 - Evaluate projects on a regional scale using GIS based tools
 - Early screening of projects to identify issues that may affect scope, schedule and budget
 - Automated reporting to reduce repetitive manual tasks (Scoping report, Prelim Hydro Report, etc.)
 - Provide one-stop-shop for a project in a geospatial format to improve efficiency and communication

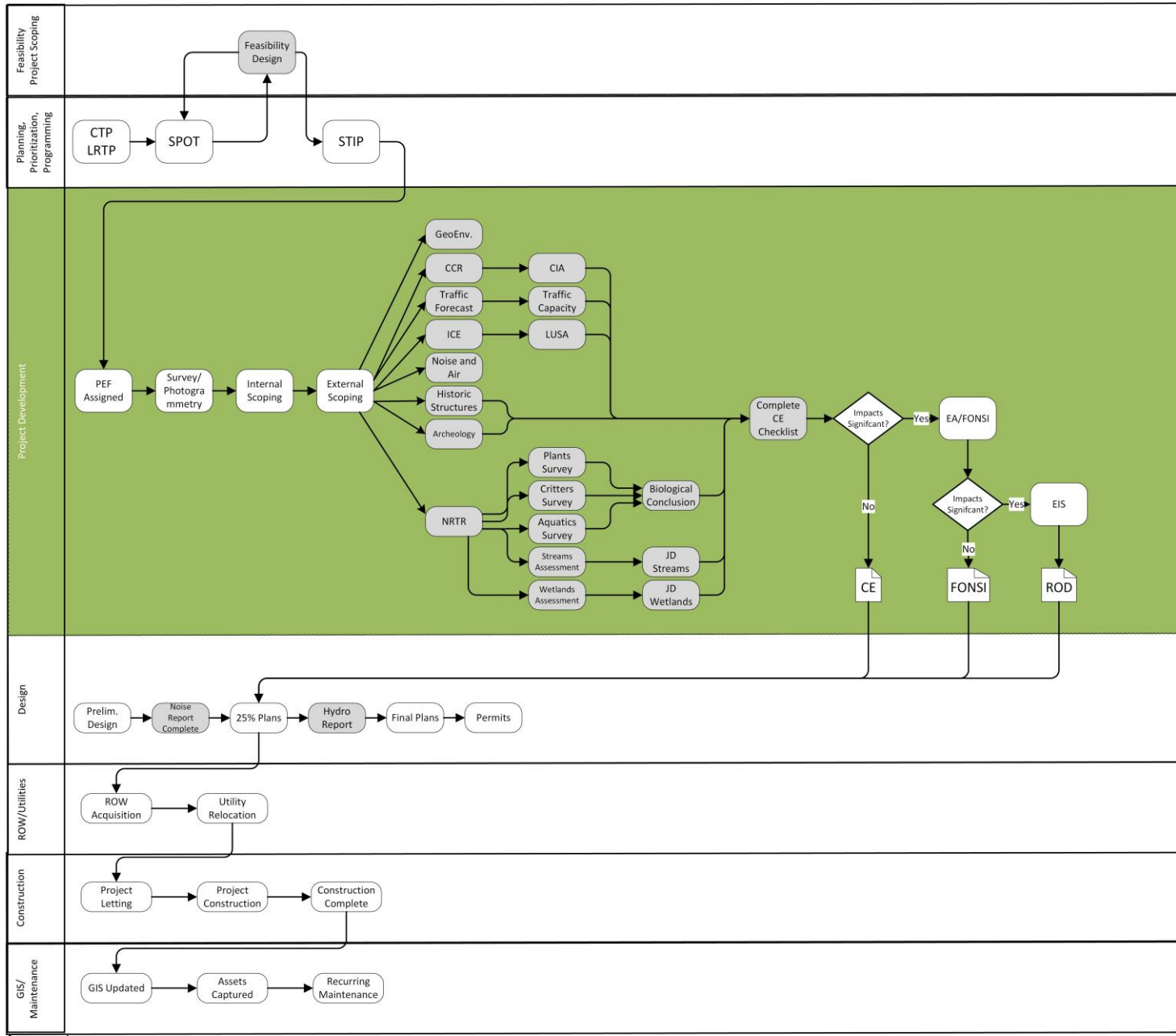
Drawings to Diagrams



AS IS Flow



AS IS Flow



NCDOT Project ATLAS

Advancing **T**ransportation through **L**inkages **A**utomation and **S**creening

Data Gateway

November 2018

A gateway to search and retrieve verifiable, current and accurate project related data.

Addresses NCDOT's need to have consistent data available to Project Managers and Consultants.

Screening Tool

November 2018

A powerful web-based tool to evaluate potential impacts to NCDOT projects using GIS data and predictive modeling.

Allows Project Managers and NCDOT Consultants to understand and coordinate earlier about challenges projects will encounter.

Project Management Platform

December 2018

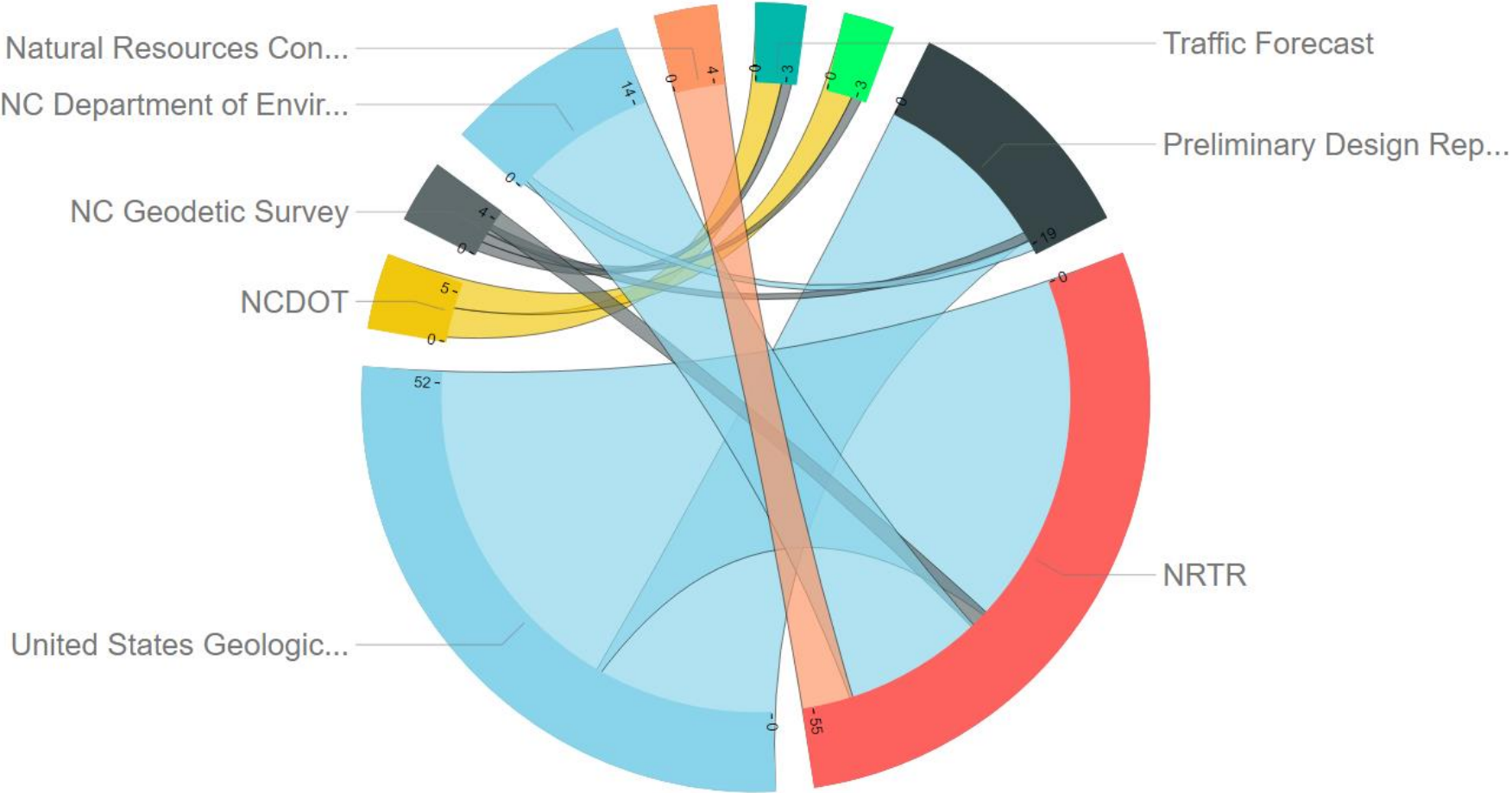
A unified toolset for Project Managers to assess and monitor their projects via the web.

Allows Project Managers and Consultants a common platform to access current project data, historic project data, current deliverable status, and visualize project progress.

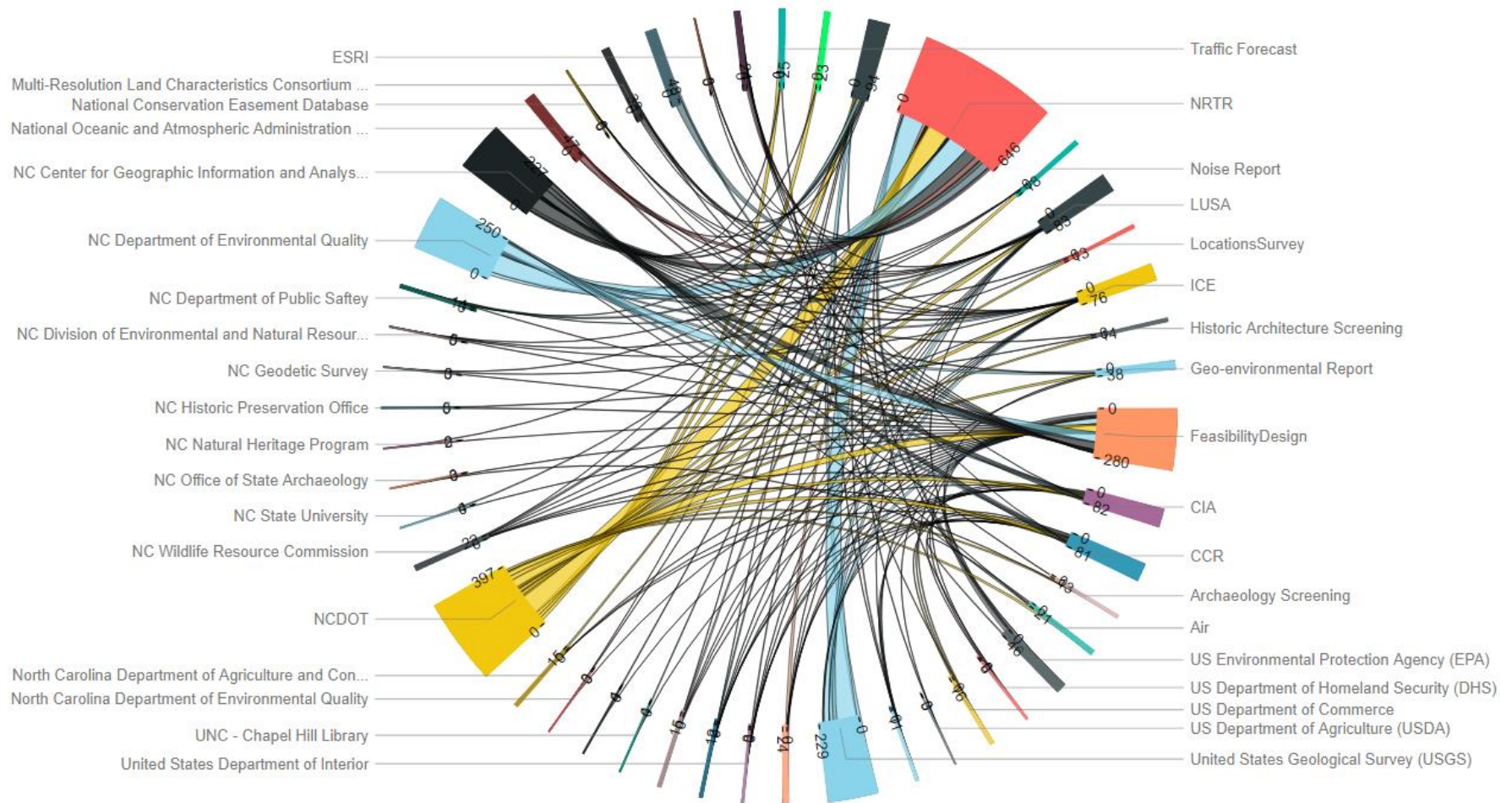


And Supporting Automation...

Data

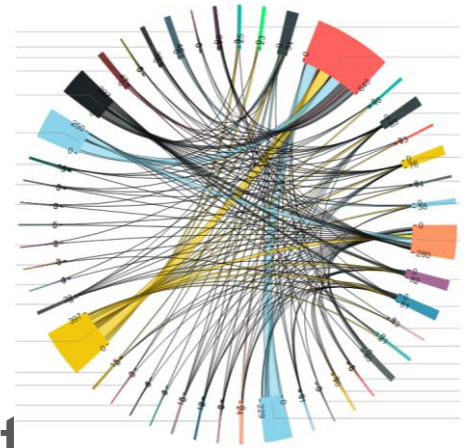


Data



Data Facts

- 498 Total Layers
- 327 Used in Decision making
- 226 Used in Screening a project



Layers Top 5 Contributors

Organization	Count	Percent
NCDOT	69	13.86%
NC Department of Environmental Quality	66	13.25%
NC CGIA	51	10.24%
United States Geological Survey (USGS)	34	6.83%
US Environmental Protection Agency (EPA)	18	3.61%

Screening Layers Top 5 Groups

Type	Group	Count
Hydrography	Natural Environment	54
Conservation Area	Natural Environment	25
Geo Environmental	Human Environment	25
Community	Human Environment	21
Transportation	Human Environment	18

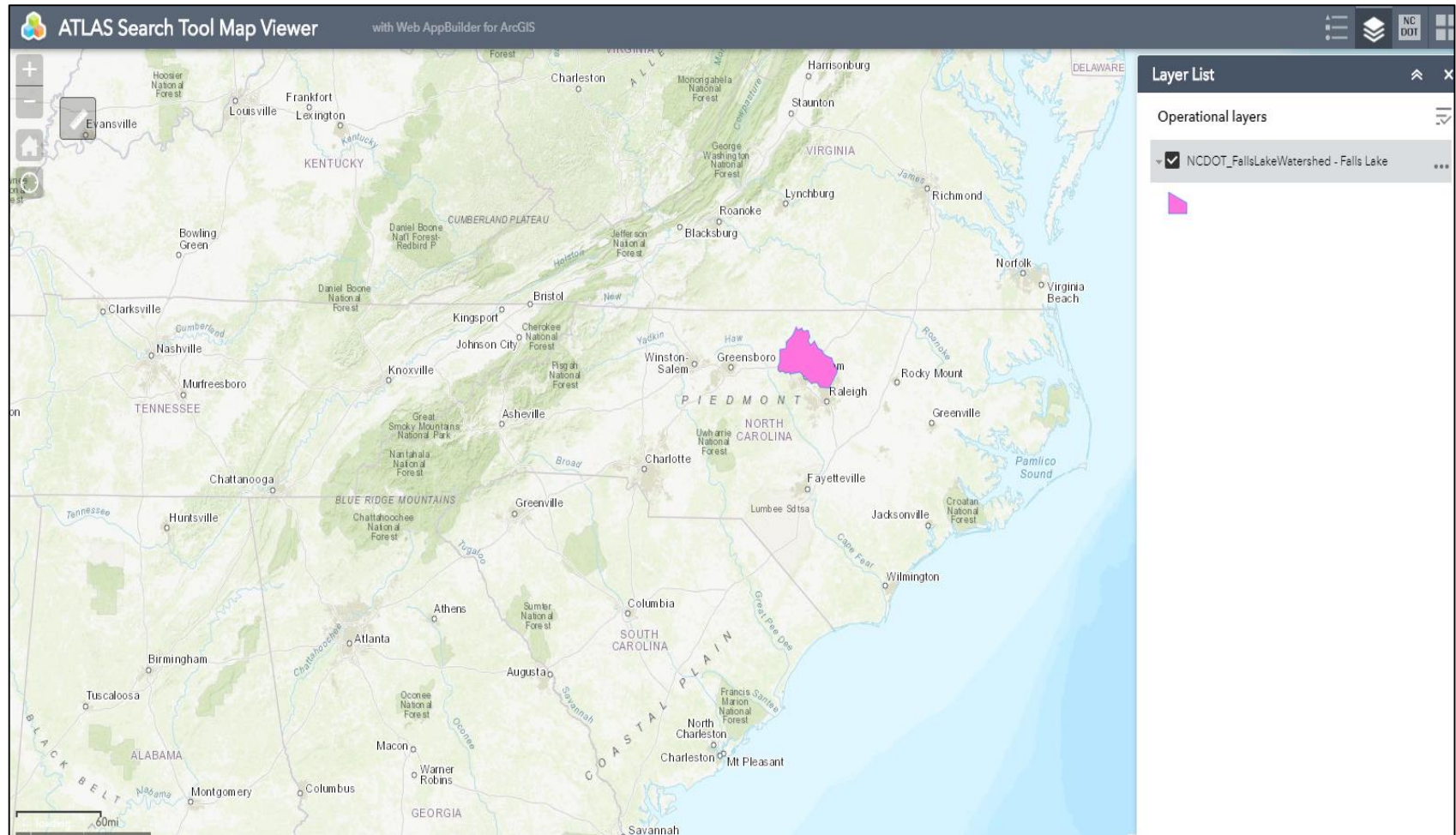
Data Facts

- Some layers owned by NCDOT
- Many available as web service
- Several represent new layers created from modeling, field investigations, and combinations of other layers.
- All will have metadata
- Each will be the authoritative source of the subject.

ATLAS Tools

- Search Tool
- Screening Tool
- Project Management Platform
- Accessible with NCID
- Some raw data protected (OSA, Protected Species)

ATLAS Data Search Tool



Project Development Screening Report



ATLAS Screening Tool

Screening Home » Screening Results

Screening Results

Number of impacts found: 10

Download Report

Download

☒ Hospitals☒ NC Colleges and Universities☒ NC DEQ DWR Animal Operation Permits☒ NC Paddle Trails - Points☒ Non-Public Schools☒ North Carolina Public Schools☒ Places of Worship☒ Public Health Dept. facilities/resources☒ Public Libraries☒ Public Sewer Service Areas -Current☒ Public Sewer Service Areas -Future

Back

Connector Project

Report Description:

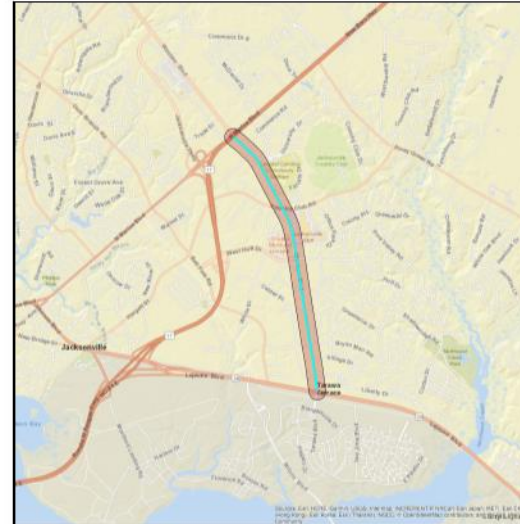
For Human Environment Info

Buffer Size: 500 Feet

STIP/SPOT ID: U-5736, H090798

STIP/SPOT Description:

U-5736: US 17 (MARINE BOULEVARD) TO NC 24 (LEJEUNE BOULEVARD) IN JACKSONVILLE. CONSTRUCT ACCESS MANAGEMENT IMPROVEMENTS.



Summary of Impacts

Impact Type

Community

Geo Environmental

Historic Archeologic

Transportation

Is Impacted

Yes

Yes

Whole group produced errors, see log.

Yes

Human Environment

Community	Count	Total Coverage	Nearest	Field
Hospitals	0	N/A	259.48ft	
NC Colleges and Universities	1	N/A	N/A	
North Carolina Public Schools	0	N/A	1834.09ft	
Public Health Dept. facilities/resources	0	N/A	15818.89ft	
Public Libraries	0	N/A	11244.77ft	
Public Sewer Service Areas -Current	1	266.63ac	N/A	
Public Sewer Service Areas -Future	1	266.63ac	N/A	

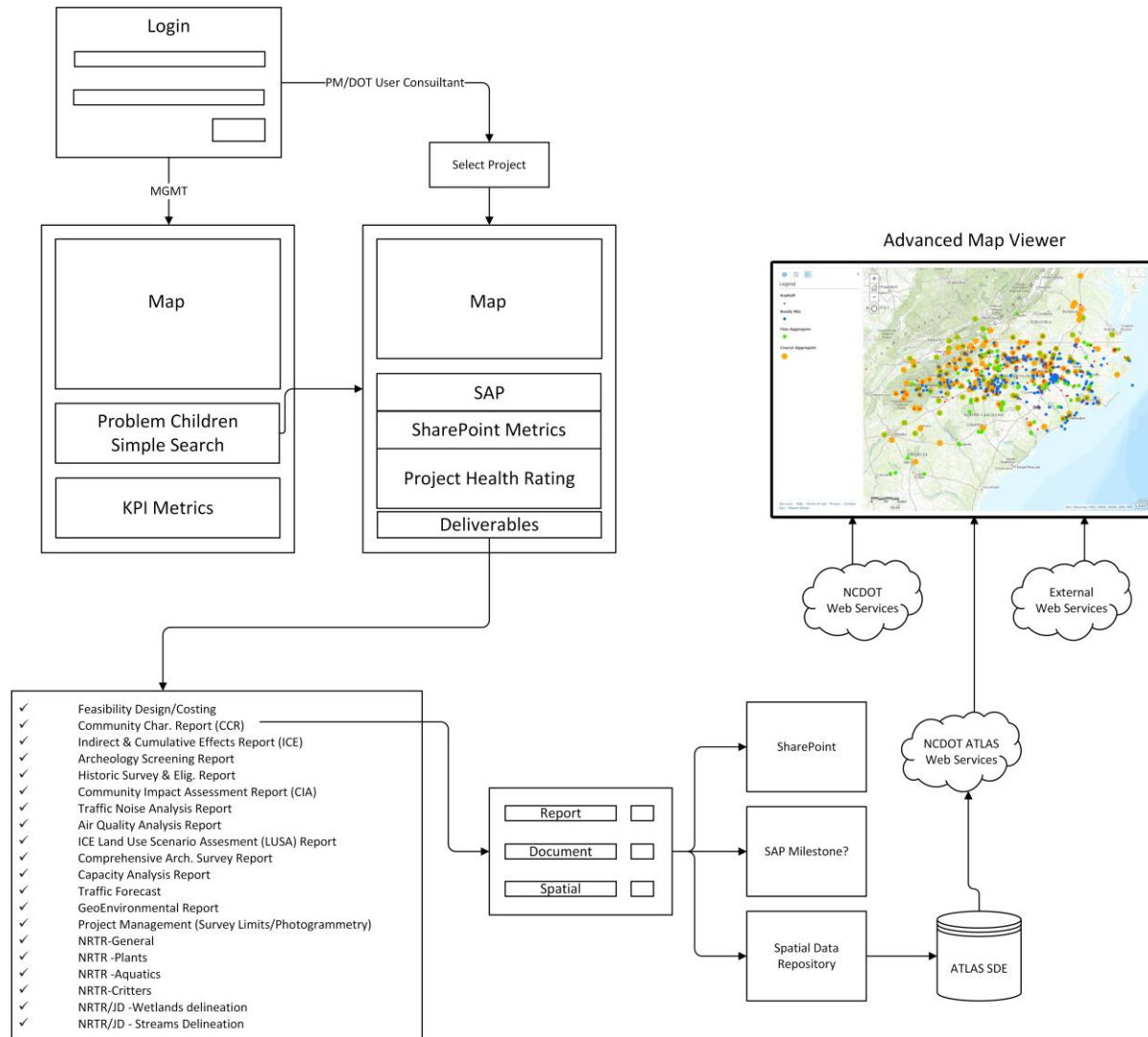
Resources

Help



Home

Project Management Platform



Project Management Platform

SHOW NAVIGATION

- ✓ 1 General Information
- ✓ 2 Purpose & Need
- ✓ 3 Proposed Action
- ✓ 4 Public Involvement
- 5 Cultural Resources
- ✓ 6 Paleontological
- ✓ 7 Section 4(f)
- ✓ 8 Special Status Species
- ✓ 9 Wetlands & Water Resources
- ✓ 10 Stormwater & Floodplain
- ✓ 11 Noise
- ✓ 12 Air
- ✓ 13 Hazardous Waste
- ✓ 14 ROW and Relocations
- ✓ 15 Other environmental Factors
- ✓ 16 Conclusion

CATEX PROCESS FORMS

1. GENERAL INFORMATION	<input checked="" type="checkbox"/> Complete
2. PURPOSE & NEED	<input checked="" type="checkbox"/> Complete
3. PROPOSED ACTION	<input checked="" type="checkbox"/> Complete
4. PUBLIC INVOLVEMENT	<input checked="" type="checkbox"/> Complete
5. CULTURAL RESOURCES	<input type="checkbox"/> Complete
6. PALEONTOLOGICAL	<input checked="" type="checkbox"/> Complete
7. SECTION 4(F)	<input checked="" type="checkbox"/> Complete
8. SPECIAL STATUS SPECIES	<input checked="" type="checkbox"/> Complete
9. WETLANDS AND WATER RESOURCES	<input checked="" type="checkbox"/> Complete

Project Management Platform

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10. Stormwater & Floodplain

11. Noise

12. Air

13. Hazardous Waste

14. ROW and Relocations

15. Other environmental Factors

16. Conclusion

17. Project Commitments


18. Review & Approval

1 GENERAL INFORMATION Complete

* denotes required field


Project Name:*
Enter a name for this project


Project Number:*
Enter Project #

Enter Pin:*
Enter Project 

Region:*
Select Region

County:*
Select County

Project Preparer:*
 Carissa Watanabe

Estimated Completion Date:*
Select Duration Select Date 

Document Type:*
Select Type

Form Controls:

An orange arrow pointing from the right side of the slide towards the 'Enter Pin' input field in the 'GENERAL INFORMATION' form section.

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Project ATLAS Status

- ATLAS Team continues to work across Units to connect all Units and Systems (SAP, SharePoint, SMO, ECM).
- Discipline Leads engaging Agencies in proposed streamlining processes and vetting of data and models.
- GIS Business Analysts and Developers working on **search, screening, and management** tools.

Final Thoughts

- It will not be perfect when first released
- It is meant to evolve over time
- We want feedback to improve data and functionality from practitioner's perspective

Questions?